



## **Cisco MDS 9148 Multilayer Fabric Switch Quick Start Guide**

**Date:** February 2010

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# 1 Overview

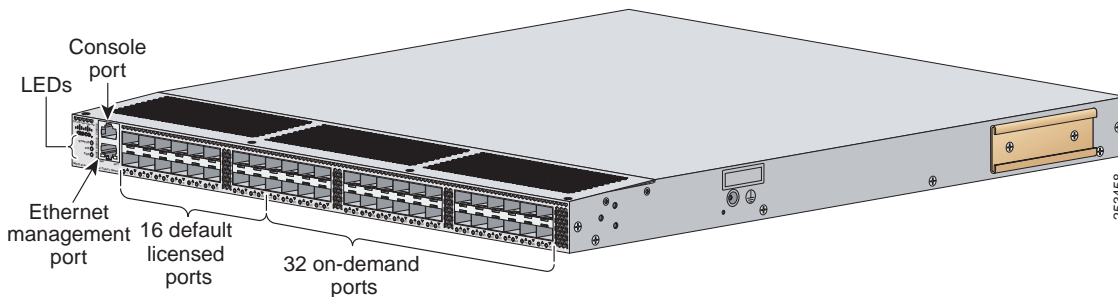
## Cisco MDS 9148 Switch

The Cisco MDS 9148 Multilayer Fabric Switch has 48 Fibre Channel ports with speeds of 8, 4, 2, and 1 Gbps. The Cisco MDS 9148 Switch is a top-of-rack (TOR) Fibre Channel switch based on System-on-a-Chip (SOC) technology, which is a Cisco innovation. The Cisco MDS 9148 Multilayer Fabric Switch has these features:

- 16, 32, or 48 default licensed ports and an 8-port on-demand license.
- 8-, 4-, 2-, 1-Gbps full line rates.
- 128 buffers available as a shared pool to each port group: 32 buffers per Fibre Channel (FC) port. A maximum of 125 buffers per port in a port group.
- Fair bandwidth arbiters.
- Device Manager Quick Config Wizard for the Cisco MDS 9148 Switch.
- Redundant power supplies and fans.
- Enterprise class features such as In-Service Software Upgrades (ISSU), Virtual SANs (VSANs), security features, and quality of service (QoS).
- Consistency with NX-OS.

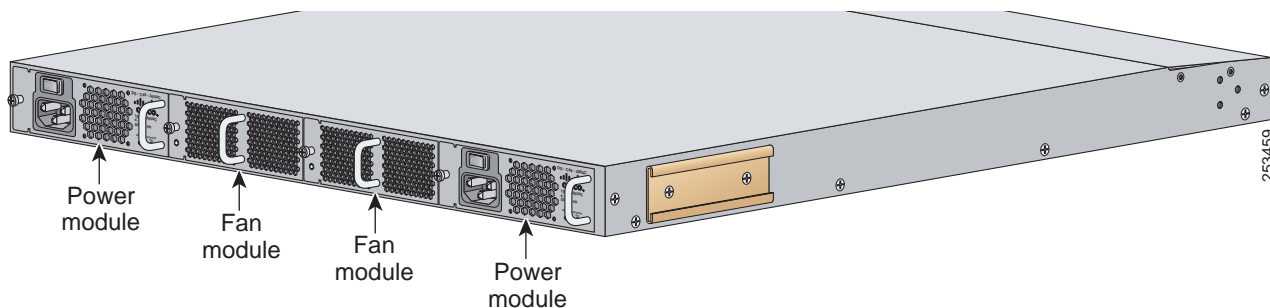
The front of the Cisco MDS 9148 Switch contains the LEDs, the console and management ports, and 48 8-Gbps Fibre Channel Ports. See [Figure 1](#).

**Figure 1** Front View of the Cisco MDS 9148 Switch



The rear of the Cisco MDS 9148 Switch contains the redundant power supplies, the AC power receptacle, and the fans. See [Figure 2](#).

**Figure 2** Rear View of the Cisco MDS 9148 Switch



**Note**

The on-demand ports can be activated in 8-port increments through software licensing.

## 2 Verifying Your Shipping Contents

Verify that you have received all items, including the following:

- Rack-mount kit
- ESD wrist strap
- Cables and connectors
- Any optional items ordered

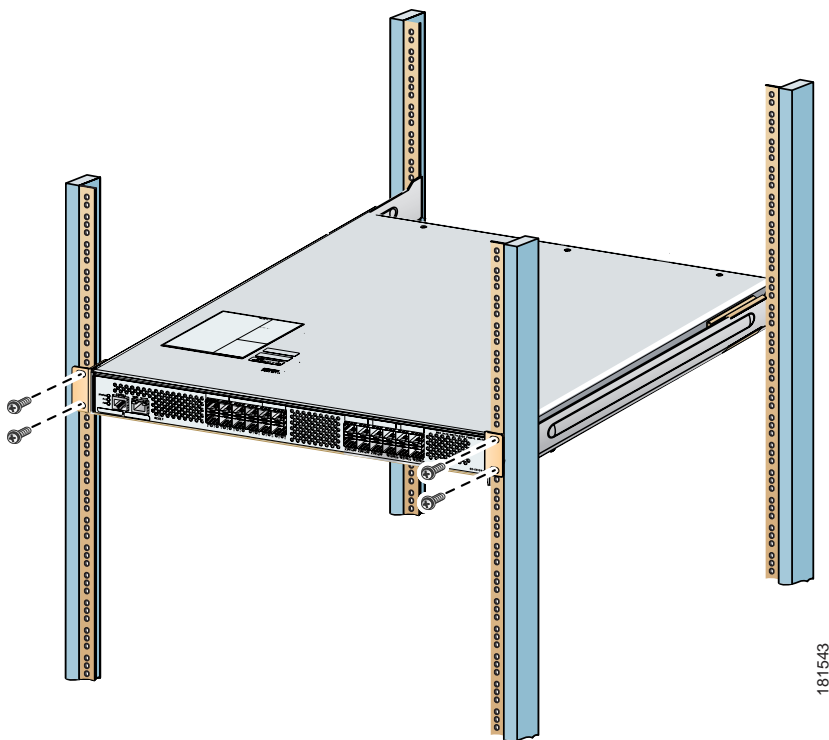
## 3 Installing the Switch

Install the switch in one of the following enclosures:

- An open EIA rack
- A perforated or solid-walled EIA cabinet
- A two-post Telco rack

For an example of a rack mount, see [Figure 3](#).

**Figure 3** Example Rack Mount



181543



### Note

Before you install the switch in a rack, you will need to install the rack mount support brackets on the switch.

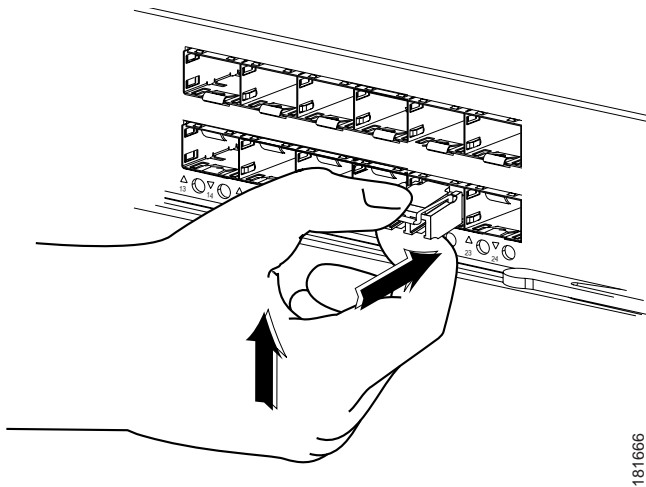
## 4 Installing the SFPs

Install one of the following SFPs in each empty port:

- A Fibre Channel Shortwave 1-, 2-, 4-, or 8-Gbps SFP transceiver, part number DS-SFP-FC8G-SW
- A Fibre Channel Long wavelength 1-, 2-, 4-, or 8-Gbps SFP transceiver, part number DS-SFP-FC8G-LW
- A Fibre Channel Short wavelength 1-, 2-, or 4-Gbps SFP transceiver, part number DS-SFP-FC4G-SW

For SFP installation, see [Figure 4](#).

**Figure 4** SFP Installation



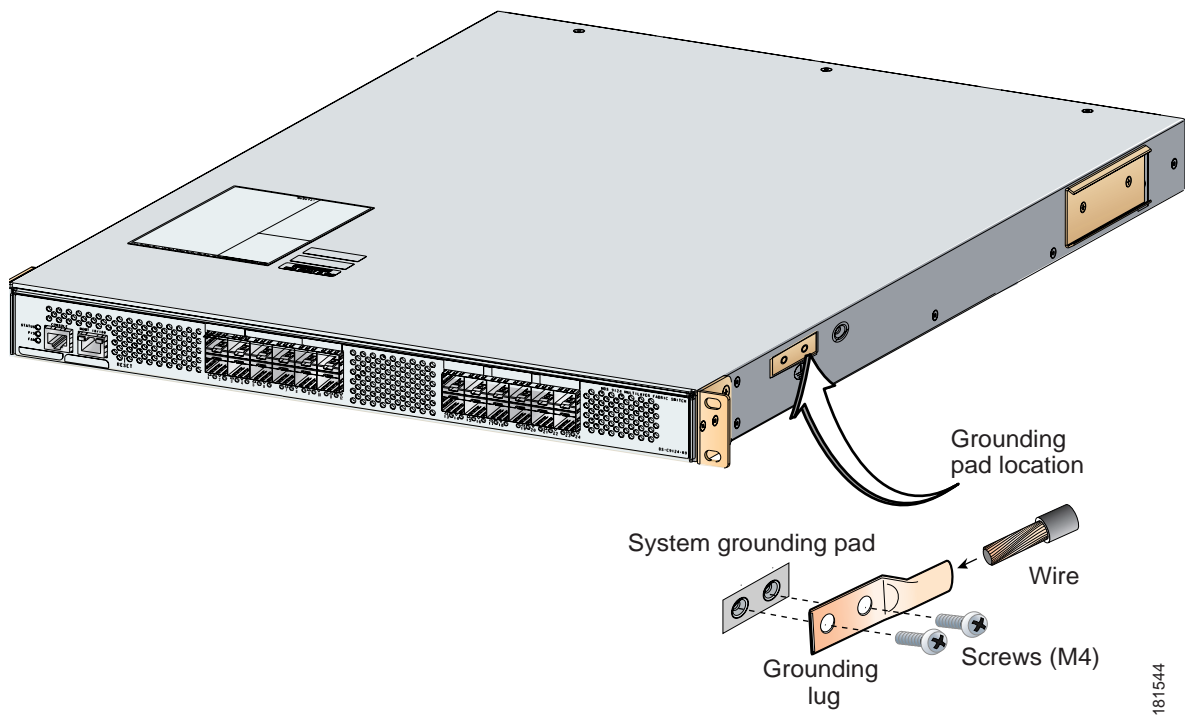
## 5 Powering Up the Switch

To power up the switch, follow these steps:

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**Step 1** Ground the switch, as shown in [Figure 5](#).

**Figure 5**     **Switch Ground**



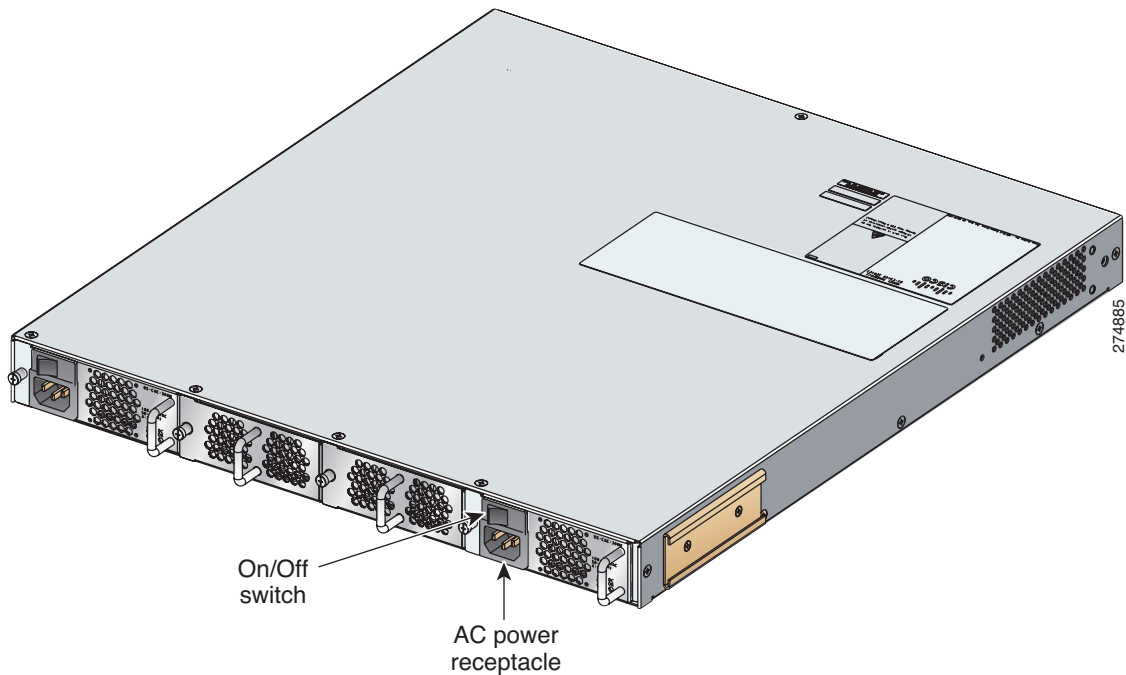
**Step 2**    Connect the power cable to the AC power receptacle, and then plug it in (see [Figure 6](#)).

The Cisco MDS 9148 Switch supports only AC power supply. The power supply status is indicated on a front panel LED.

The Cisco MDS 9148 Switch includes a front panel reset button that resets the switch without cycling the power.

**Step 3**    Power up the switch (see [Figure 6](#)).

**Figure 6** Power Receptacle and On/Off Switch on Cisco MDS 9148 Switch

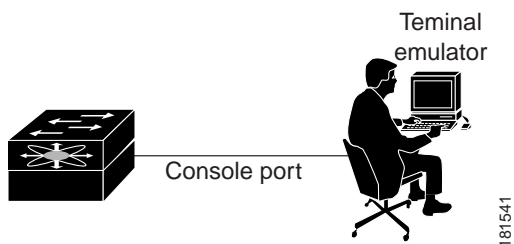


## 6 Setting Up a Network

To set up a network, follow these steps:

- Step 1** Ensure that the Mgmt0 port is connected to the management network.
- Step 2** Ensure that the console port is connected to the PC serial port (or to a terminal server), as shown in [Figure 7](#). For example, on a Windows PC used as a terminal emulator, you can use HyperTerminal. The default baud rate on the console port is 9600.

**Figure 7** Connection to Terminal Emulator.



**Note**

See [Figure 1](#) for the physical location of the Mgmt 0 port and console ports.

**Step 3** Use the switch setup utility that appears on the console connection.

**Step 4** Use the switch setup utility to do the following:

- a. Set the admin password for the switch.



**Caution**

Make sure that you configure a strong password. Short, easy-to-decipher passwords are not allowed by Cisco NX-OS software. Strong passwords are at least eight characters long and contain numbers, uppercase letters, and lowercase letters.

- b. Assign an IP address and a netmask to the switch, as shown in Example 1.

**Example 1** *IP Address Step in the Setup Utility*

```
Continue with Out-of-band (mgmt0) management configuration? {yes/no}: yes  
Mgmt0 IPV4 address: 209.165.200.225  
Mgmt0 IPV4 netmask: 255.255.255.224
```

- c. Set up the default gateway.



**Note**

The switch is now ready to be managed via the Mgmt port using Telnet or Device Manager or Fabric Manager.

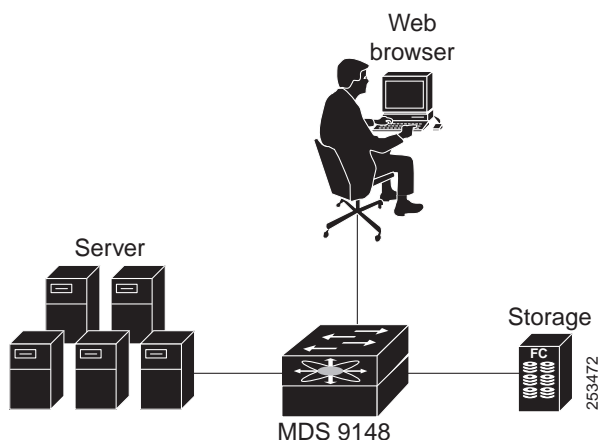
## 7 Connecting Devices

To connect devices, follow these steps:

**Step 1** Connect a server to the switch (see [Figure 8](#)).

**Step 2** Connect a storage device to the switch (see [Figure 8](#)).

**Figure 8** *Server and Storage Connection*



**Note**

For more information about switch installation and configuration, see the *Cisco MDS 9100 Series Hardware Installation Guide* and the appropriate CISCO MDS 9000 Family NX-OS feature configuration guides.

## 8 Installing Cisco Device Manager

To install Cisco Device Manager, follow these steps:

- Step 1** Enter the IP address you assigned to your switch in your **Address** field of your browser to begin the Cisco Device Manager installation.
- Step 2** Click the **Device Manager** link, shown in [Figure 9](#).

**Figure 9** Cisco Device Manager Installation



- Step 3** Follow the onscreen instructions to install Cisco Device Manager.

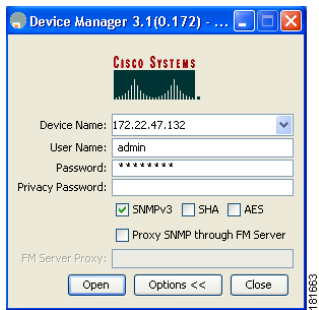


## 9 Using the Quick Config Wizard

To enable ports and assign zone memberships, follow these steps:

- Step 1 Click the **Device Manager** icon on your desktop to log in.
- Step 2 Enter a password in the **Password** field (see [Figure 10](#)).
- Step 3 Click **Open** (see [Figure 10](#)).

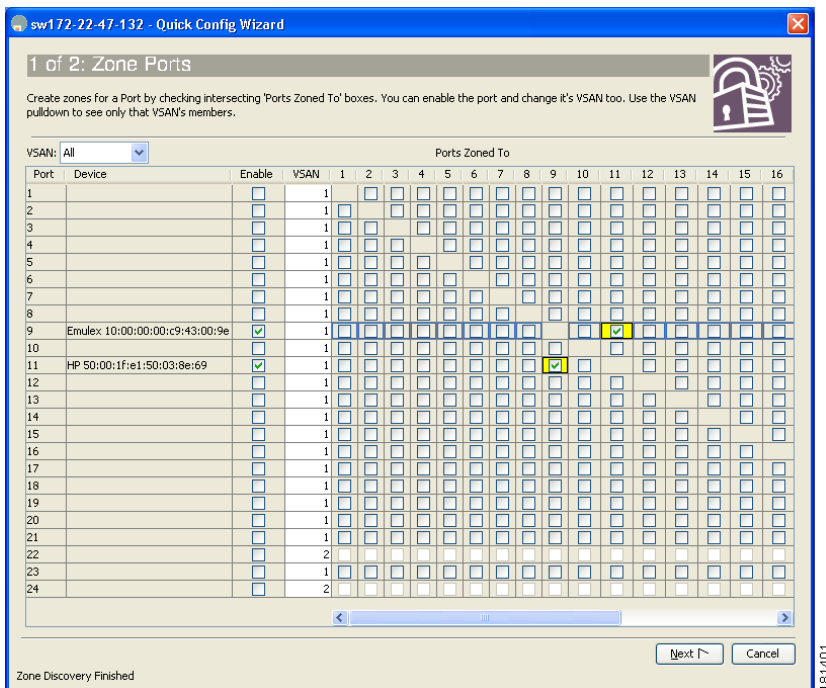
Figure 10 Device Manager Login



- Step 4 Click **FC**, and then choose **Quick Config**.

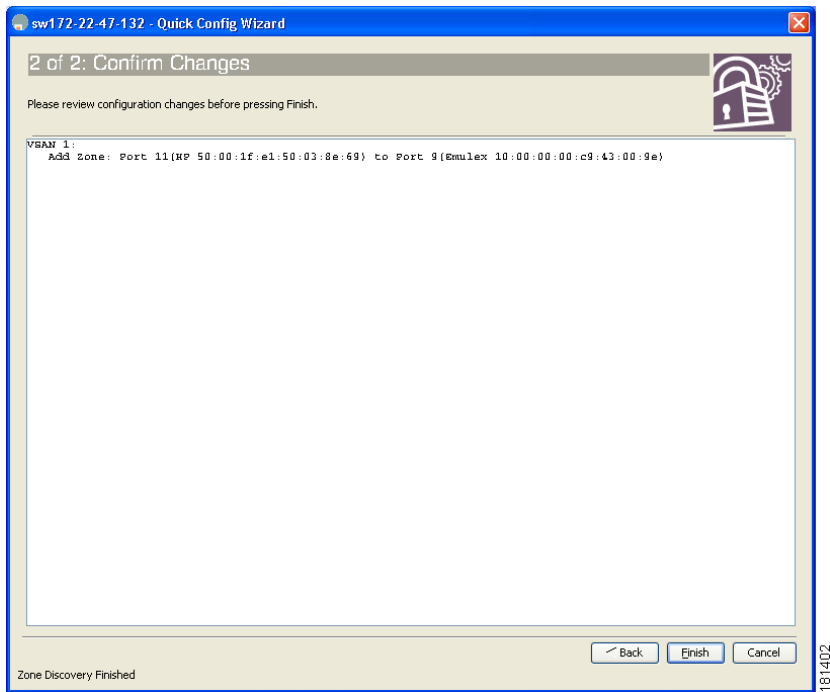
- Step 5 Enable two ports by checking the two corresponding check boxes in the **Enable** column, as shown in [Figure 11](#).

Figure 11 Enable Zone Ports



- Step 6 Select one of the two enabled ports that you want in a zone by checking its check box in the **Ports Zoned To** area. When you check this check box, the second enabled port automatically becomes checked. Both ports are now members of the same zone.
- Step 7 Click **Next**.  
You see a summary of your changes, as shown in [Figure 12](#).

**Figure 12** Confirm Changes



**Step 8** Click **Finish** to save your changes.

**Step 9** Repeat Steps 2 through 5 to create more zones.



**Note** A maximum of 12 zones with two ports each can be created with the Quick Config Wizard.



**Note** For more information about installing Cisco Device Manager and using the Quick Config Wizard, see the *Cisco MDS 9000 Family Fabric Manager Configuration Guide*.

## 10 Creating VSANs

To create VSANs, follow these steps:

**Step 1** Click the **Device Manager** icon on your desktop to log in.

**Step 2** Enter a password in the **Password** field (see [Figure 13](#)).

**Step 3** Click the **Open** button (see [Figure 13](#)).

**Figure 13** Device Manager Login

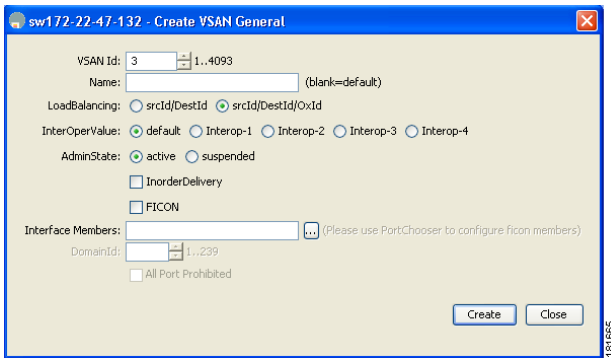


**Step 4** Click **FC**, and then choose **VSANs**.

**Step 5** Click **Create**.

**Step 6** Use the Create VSAN General dialog box to create a VSAN, as shown in [Figure 14](#).

**Figure 14** VSAN Creation



**Step 7** Click **Finish** to save your changes.

**Step 8** Repeat Step 6 and 7 to create more VSANs.



**Note** For more information on how to create VSANs, see the *Cisco MDS 9000 Family CLI Configuration Guide*.

This completes the installation of your Cisco MDS 9148. The switch is now ready to use.

# 11 Need Help?

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support and Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

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